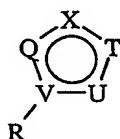


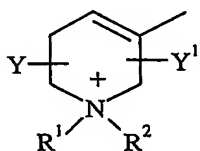
WHAT IS CLAIMED IS:

1. A pesticidal composition comprising a pesticidally effective amount of a compound of formula I in admixture with at least one agriculturally acceptable extender or adjuvant, wherein said compound of formula I is:

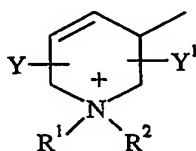


wherein

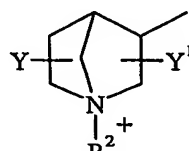
-R is an azacycle selected from the following:



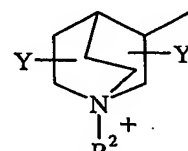
W1



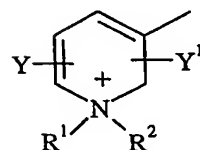
W2



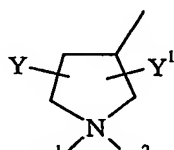
W3



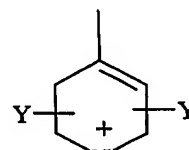
W4



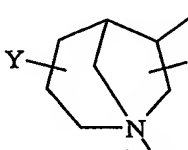
W5



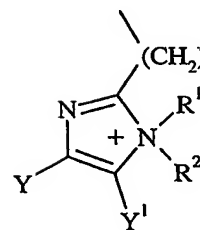
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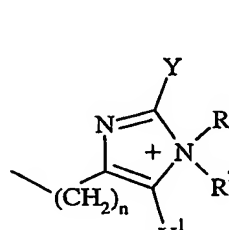
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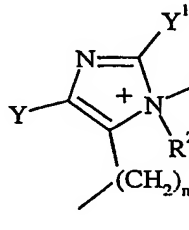
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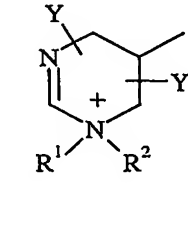
W9



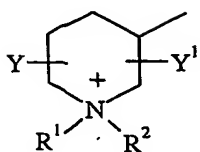
W10



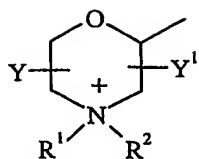
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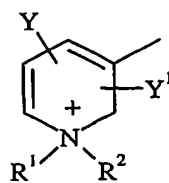
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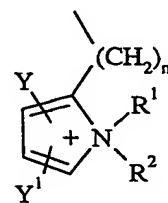
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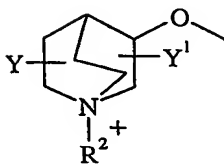
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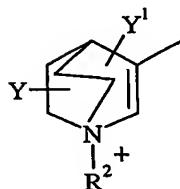
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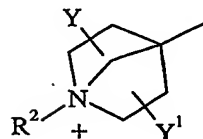
W16



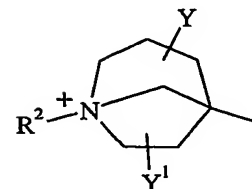
W17



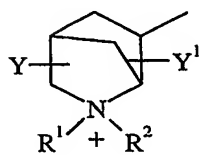
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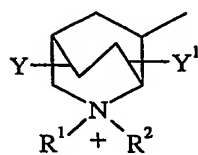
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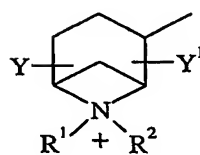
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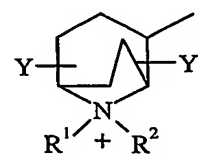
W21



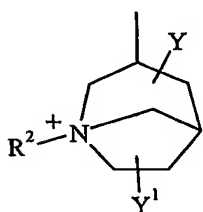
W22



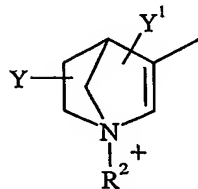
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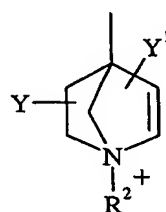
W24



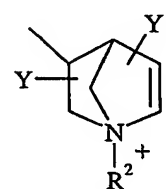
W25



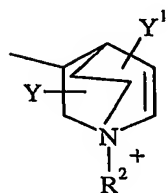
W26



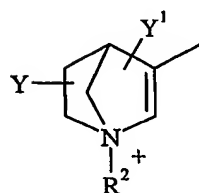
W27



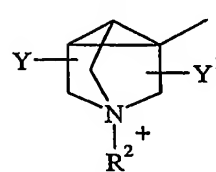
W28



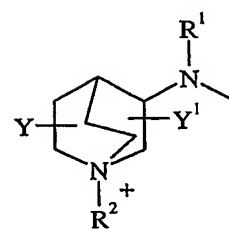
W29



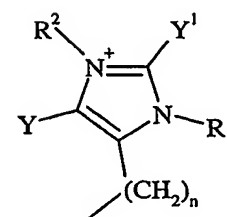
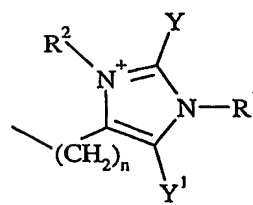
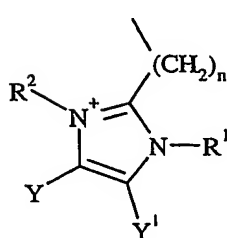
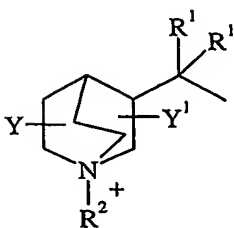
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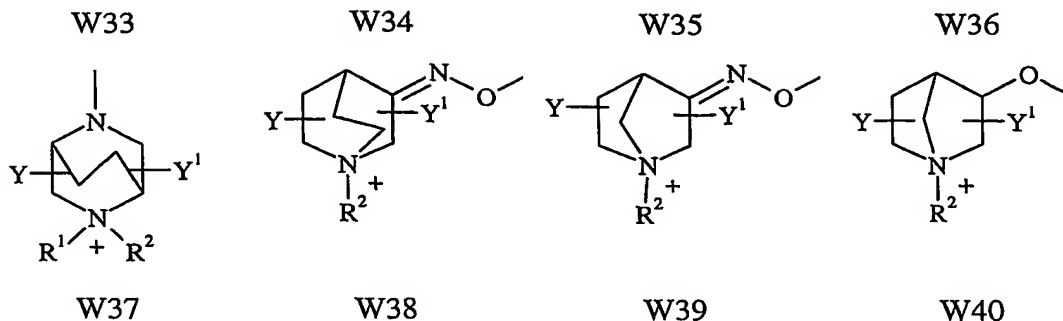


W31



W32





where

-Y and Y¹ may be attached at the same or different positions, and are independently selected from hydrogen, halogen, hydroxy, cyano, nitro, amino, carboxyl, alkyl, haloalkyl, alkenyl, alkoxy, haloalkoxy, aminoalkoxy, alkylcarbonyl, haloalkylcarbonyl, alkoxycarbonyl, haloalkoxycarbonyl, arylalkyl, aryl, aryloxy, and heterocyclyl, where the aryl and heterocyclyl moieties may be optionally substituted with halogen, alkyl, haloalkyl, alkoxy, or haloalkoxy;

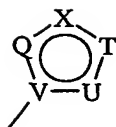
R¹ is selected from alkyl, haloalkyl, alkenyl, haloalkenyl, alkynyl, arylalkyl, and aryl; wherein the aryl may be optionally substituted with halogen, alkyl, haloalkyl, alkoxy, or haloalkoxy;

R² is selected from O⁻, forming an N-oxide; alkyl, alkoxy, haloalkyl, alkenyl, haloalkenyl, haloalkoxy, alkylcarbonyloxy, alkoxycarbonylalkyl, Ocarbonylalkyl, alkylthioalkyloxy, alkylsulfinylalkyloxy, alkylsulfonylalkyloxy, alkoxyphosphonylalkyloxy, Ophosphonylalkyloxy, alkoxyalkyl, arylalkyl, arylalkyloxy, arylcarbonyloxy, arylalkoxycarbonyloxy, arylalkylcarbonyloxy, aryl, -OC(O)N(R³)(R⁴); wherein the aryl may be optionally substituted with halogen, alkyl, haloalkyl, alkoxy, or haloalkoxy moiety;

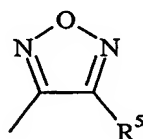
where

R³ and R⁴ are independently selected from hydrogen, alkyl, alkylcarbonyl, alkoxycarbonyl, alkoxyalkyl, aminoalkyl, aryl, arylalkyl, and carbonylamino; where the aryl may be optionally substituted with halogen, alkyl, haloalkyl, alkoxy, cyano, or haloalkoxy;

and,

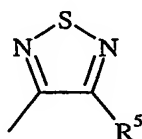


is a 5-membered heterocycle, wherein V is carbon or nitrogen; Q is carbon, nitrogen or oxygen; X is carbon, nitrogen, oxygen or sulfur, T is carbon, nitrogen, oxygen or C(=O); and U is carbon, nitrogen, oxygen or sulfur, wherein said 5-membered heterocycle is selected from the following;



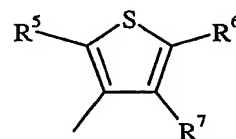
X1

a 1,2,5-oxadiazol-3-yl



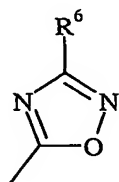
X2

a 1,2,5-thiadiazol-3-yl



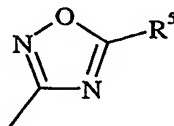
X3

a thien-3-yl



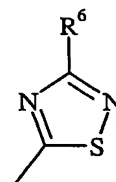
X4

a 1,2,4-oxadiazol-5-yl



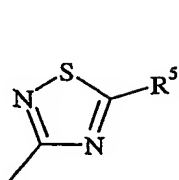
X5

a 1,2,4-oxadiazol-3-yl



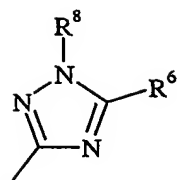
X6

a 1,2,4-thiadiazol-5-yl



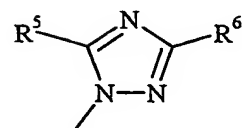
X7

a 1,2,4-thiadiazol-3-yl



X8

a 1,2,4-triazol-3-yl



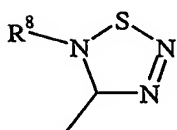
X9

a 1,2,4-triazol-1-yl



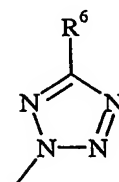
X10

a 1,2,5-thiadiazolin-3-yl



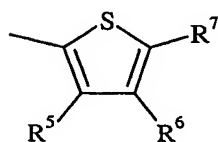
X11

a 1,2,3,5-thiatriazolin-4-yl



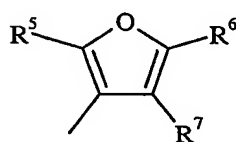
X12

a 1,2,3,4-tetraazol-2-yl



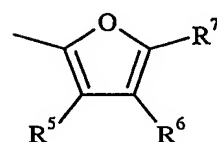
X13

a thien-2-yl



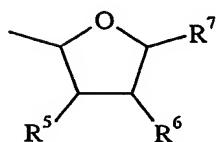
X14

a furan-3-yl



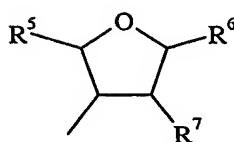
X15

a furan-2-yl



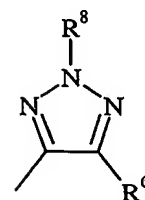
X16

a tetrahydrofuran-2-yl



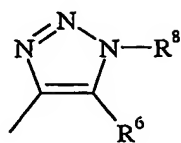
X17

a tetrahydrofuran-2-yl



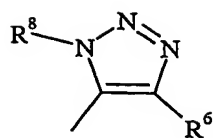
X18

a 1,2,3-triazol-4-yl



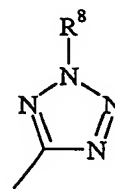
X19

a 1,2,3-triazol-4-yl



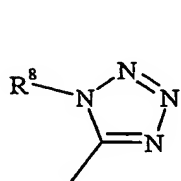
X20

a 1,2,3-triazol-4-yl



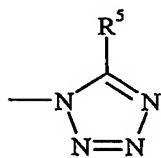
X21

a tetraazol-5-yl



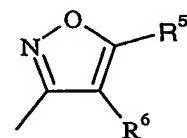
X22

a tetraazol-5-yl



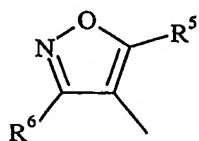
X23

a 1,2,3,4-tetraazol-1-yl



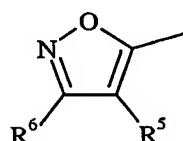
X24

an isoxazol-3-yl



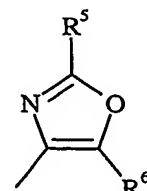
X25

an isoxazol-4-yl



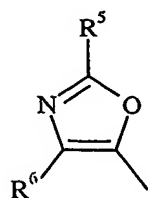
X26

an isoxazol-5-yl



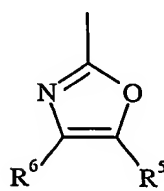
X27

a 1,3-oxazol-4-yl



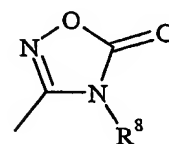
X28

an oxazol-5-yl



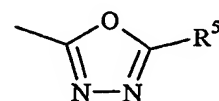
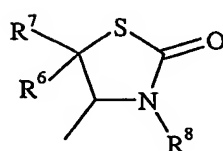
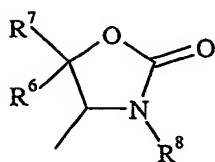
X29

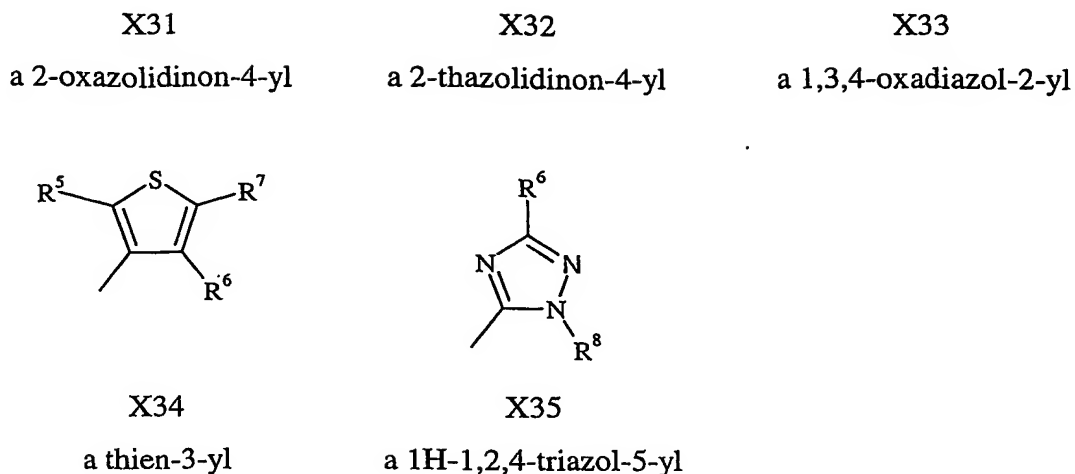
an oxazol-2-yl



X30

a 2-oxadiazolidinon-4-yl





where

$-R^5$, R^6 and R^7 are independently selected from hydrogen; hydroxy; hydroxyalkyl, aminoalkyl, halogen; amino; nitro; alkynyl; haloalkynyl; alkoxy; alkoxyalkyl, haloalkoxy; aryl, arylalkyloxy, alkenyloxy; alkynyloxy; thiol; alkylthio; haloalkylthio; cyanoalkylthio; alkenylthio; alkynylthio; alkoxythio, carboxyl, formyl; alkyloxycarbonyl; carboxyl; $-N(R^9)(R^{10})$; $-NHN(R^9)(R^{10})$; $-NHC(O)R^9$; $-NHC(O)OR^9$; $-OC(O)R^9$; where the aryl may be optionally substituted with halogen, alkyl, haloalkyl, alkoxy, cyano, or haloalkoxy;

where

R^8 is selected from alkyl, haloalkyl, arylalkyl, alkoxy, alkenyl, haloalkenyl, alkynyl, haloalkynyl,

where

R^9 and R^{10} are independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylthio, alkylcarbonyl, alkoxy carbonyl, aryl, arylalkyl, and carbonylamino; where the aryl may be optionally substituted with halogen, alkyl, haloalkyl, alkoxy, cyano, or haloalkoxy;

and

the corresponding agriculturally acceptable salts thereof.

2. The composition of claim 1, wherein said azacycle R is selected from W1, W3, W4, W8, W13 and W20;

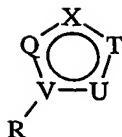
-Y and Y¹ are independently selected from hydrogen and halogen;
-R¹ is selected from alkyl, haloalkyl, alkoxyalkyl, arylalkyl, alkenyl, haloalkenyl and alkynyl,
and
-R² is O⁻; forming an N-oxide;
and
said 5-membered heterocycle is selected from X2, X4, X6, X8, X12, X18, X33 and X34;
where
-R⁵, R⁶ and R⁷ are independently selected from hydrogen; halogen; amino; alkyl, alkenyloxy, haloalkenyloxy, alkynyloxy, haloalkynyloxy, alkoxy, and haloalkoxy.

3. The composition of claim 2, wherein said azacycle R is selected from W1, W3, W4, W8 and W20; Y and Y¹ are hydrogen; R¹ is selected from methyl and ethyl, and said 5-membered heterocycle is selected i) from X2 where R⁵ is hydrogen and X6 where R⁶ is hydrogen; ii) from X4 and X12, where R⁶ is selected from halogen, alkyl and amino; iii) from X8, where R⁶ is hydrogen and R⁸ is selected from alkyl and arylalkyl; iv) from X18, where R⁸ is alkyl; and v) from X34, where R⁵ is hydrogen and R⁶ is alkoxy.

4. The composition of claim 3, wherein said 5-membered heterocycle is selected i) from X2; ii) from X4, where R⁶ is methyl or ethyl; and iii) from X12, where R⁶ is methyl.

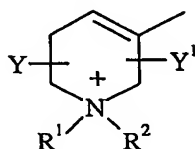
5. The composition of claim 4, wherein said azacycle R is W3 and said 5-membered heterocycle is selected i) from X4, where R⁶ is methyl; and ii) from X12.

6. A pesticidal composition comprising a pesticidally effective amount of a compound of formula I in admixture with at least one agriculturally acceptable extender or adjuvant, wherein said compound of formula I is:

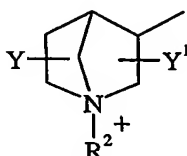


wherein

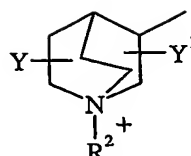
-R is an azacycle selected from the following:



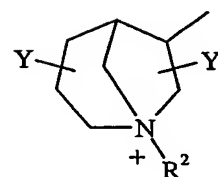
W1



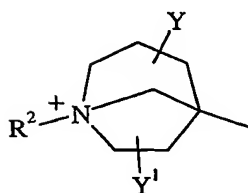
W3



W4



W8



W20

where

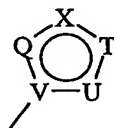
-Y and Y¹ may be attached at the same or different positions, and are independently selected from hydrogen and halogen;

-R¹ is selected from alkyl, haloalkyl, alkoxyalkyl, arylalkyl, alkenyl, haloalkenyl, alkynyl, haloalkynyl,

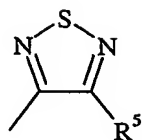
and

-R² is O⁻; forming an N-oxide;

and

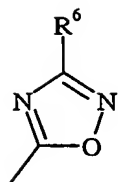


is a 5-membered heterocycle, wherein V is carbon or nitrogen; Q is carbon or nitrogen; X is carbon, nitrogen or sulfur, T is carbon or nitrogen; and U is carbon, nitrogen, oxygen or sulfur, wherein said 5-membered heterocycle is selected from the following;



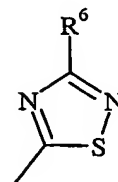
X2

a 1,2,5-thiadiazol-3-yl



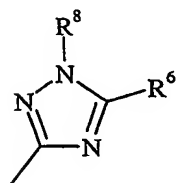
X4

a 1,2,4-oxadiazol-5-yl



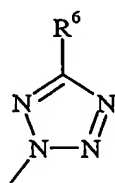
X6

a 1,2,4-thiadiazol-5-yl



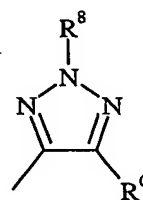
X8

a 1,2,4-triazol-3-yl



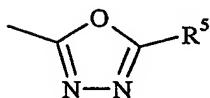
X12

a 1,2,3,4-tetraazol-2-yl



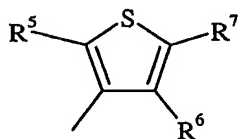
X18

a 1,2,3-triazol-4-yl



X33

a 1,3,4-oxadiazol-2-yl



X34

a thien-3-yl

where

$-R^5$, R^6 and R^7 are independently selected from hydrogen; halogen; amino; alkyl, alkoxy, alkenyloxy, and alkynyloxy;

and

the corresponding agriculturally acceptable salts thereof.

7. The composition of claim 6, wherein and Y^1 are hydrogen; R^1 is selected from methyl and ethyl and said 5-membered heterocycle is selected i) from X2 where

R⁵ is hydrogen and X6 where R⁶ is hydrogen; ii) from X4 and X12, where R⁶ is selected from halogen, alkyl and amino; iii) from X8, where R⁶ is hydrogen and R⁸ is selected from alkyl and arylalkyl; iv) from X18, where R⁸ is alkyl; and v) from X34, where R⁵ is hydrogen and R⁶ is alkoxy.

8. The composition of claim 7, wherein said 5-membered heterocycle is selected i) from X2; ii) from X4, where R⁶ is methyl or ethyl; and iii) from X12, where R⁶ is methyl.

9. The composition of claim 8, wherein said azacycle R is W3 and said 5-membered heterocycle is selected i) from X4, where R⁶ is methyl; and ii) from X12.

10. The composition of claim 1, further comprising one or more second compounds selected from the group consisting of pesticides, plant growth regulators, fertilizers and soil conditioners.

11. A method of controlling insects and acarids, comprising applying an insecticidally and acaricidally effective amount of a composition of claim 1 to a locus where insects and acarids are present or are expected to be present.

12. A method of controlling insects and acarids, comprising applying an insecticidally and acaricidally effective amount of a composition of claim 10 to a locus where insects and acarids are present or are expected to be present.